

6.0 ENVIRONMENTAL INFORMATION

6.1 INTRODUCTION

This chapter presents an evaluation of whether the Project at the Morro Bay Power Plant (MBPP) will impact one or more of 17 identified environmental resource areas based on state laws that require consideration of a wide range of potential environmental impacts from a proposed project (see California Energy Commission [Commission] requirements, Public Resources Code [PRC] Section 25519, and California Environmental Quality Act [CEQA] requirements, PRC Section 21080 et seq.).

For each resource area that follows, the analysis begins with a description of the existing environment and is followed by an evaluation of potential environmental consequences associated with the Project. Project design features and/or mitigation measures are provided, as appropriate, to reduce or avoid significant impacts. A cumulative impacts analysis then considers other activities in the Morro Bay and broader San Luis Obispo County area which, when considered together with the Project, could potentially compound or increase environmental impacts. Supporting information to confirm compliance with applicable laws, ordinances, regulations and standards (LORS) is included in the specific environmental resource sections, with further details provided in Chapter 7.0 - Laws, Ordinances, Regulations and Standards.

The analyses presented in this chapter are based on the following: 1) details of the Project as presented in Chapter 2.0 - Project Description; 2) consideration of Commission regulations (Rules of Practice and Procedure & Power Plant Site Certification Regulations, California Code of Regulations [CCR] Title 20, Chapters 1, 2, 5, 6 and 7); and 3) consideration of input from Commission staff and the various responsible and reviewing agencies. The analyses comply with Commission requirements for an Application for Certification (AFC). Additionally, information in this chapter supports the various approvals and permitting requirements discussed herein and in Chapter 7.0.

The resource areas analyzed in this chapter are as follows:

- Air Quality (6.2)
- Geologic Hazards and Resources (6.3)
- Agriculture and Soils (6.4)
- Water Resources (6.5)
- Biological Resources (6.6)
- Cultural Resources (6.7)
- Paleontologic Resources (6.8)

- Land Use (6.9)
- Socioeconomics (6.10)
- Traffic and Transportation (6.11)
- Noise (6.12)
- Visual Resources (6.13)
- Waste Management (6.14)
- Hazardous Materials Handling (6.15)
- Public Health (6.16)
- Worker Safety (6.17)
- Transmission Systems Safety and Nuisance (6.18)

6.1.1 DESCRIPTION OF EXISTING ENVIRONMENT

The existing environment for each resource area is presented in this chapter to establish baseline conditions for consideration of potential Project-related environmental impacts. Both local and regional conditions are described, based on reasonable potential Project impacts, as well as Commission and CEQA requirements. Each description of existing conditions is intended to allow the reader to understand the nature and extent of potential impacts from the Project.

6.1.2 EVALUATION OF ENVIRONMENTAL IMPACTS

The impact evaluations in this chapter address foreseeable positive and negative environmental effects that could occur as a result of Project construction and operation. The analyses are formulated on the basis of planned Project design and operations, available information from secondary sources, and site and regional field investigations. Projections of potential impacts are conservative, in order to consider maximum likely impact scenarios.

For purposes of this AFC, an environmental impact is defined as a beneficial or adverse change in the status of physical conditions as a result of Project construction or operations. Impacts can be direct and occur within the same time frame and location as the Project, or indirect, occurring later in time, farther removed in distance, and/or as a result of a direct impact. The duration of the impact can be temporary (short-term) or relatively permanent (long-term). Anticipated impacts are assessed quantitatively and/or qualitatively, as appropriate.

The significance of anticipated impacts is assessed based upon criteria established for each environmental resource area. Significance criteria were determined based on CEQA Guidelines, Appendix G, Environmental Checklist Form (approved January 1, 2000), and on performance standards or thresholds used in the past by responsible agencies for projects in their jurisdictions.

Considerations of significance are based on potential change to the existing environment and a determination of what may constitute a substantial detrimental effect, and include:

- Resource sensitivity, or the probable response of a particular resource to project-related activities.
- Resource quality, or the present condition of the resource potentially affected.
- Resource quantity, or the amount of the resource potentially affected.
- Duration of impact, or the period of time, over which the resource would be affected, stated as short-term (up to a few years) or long-term (consistent with the operational life of the Project or beyond).

6.1.3 PROJECT DESIGN FEATURES AND/OR MITIGATION MEASURES

As part of the Project, various measures to reduce potential environmental impacts will be implemented through Project design. In this way, Duke Energy has identified and resolved potential environmental impacts in advance, in order to develop and maintain a Project that is consistent with the character of the local community. Measures to reduce environmental impacts are also included based on applicable LORS. Planning and design efforts for the Project will incorporate provisions for compliance with these LORS.

In addition to design/operational plans and applicable LORS-derived measures incorporated into the Project, mitigation measures are presented in this AFC to reduce the extent of potential significant environmental impacts identified in the environmental resource area analyses.

Methods available to mitigate potential environmental impacts generally include:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of an action.
- Rectifying the impact by repairing, rehabilitating, or reclaiming the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance.
- Compensating for the impact by replacing or providing substitute resources or environments.

The feasibility and effectiveness of Project design features and/or mitigation measures have been considered in developing the measures included in this AFC. If a particular measure has been incorporated into Project design/operational plans or is provided based on applicable LORS, it is considered integral to the Project rather than a mitigation measure.

6.1.4 CUMULATIVE PROJECTS

The CEQA Guidelines (Sections 15130 and 15065) require identification of other past, current or probable projects in the area (both public and private) that, when considered together with the Project, could result in cumulative impacts in the region. Cumulative impacts could occur to the extent that impacts related to the Project combine with impacts from these other projects.

Three types of cumulative projects are considered, as appropriate in the environmental resource area analyses: 1) a separate activity (i.e., offsite tank farm demolition) that Duke Energy is undertaking in the vicinity of the MBPP that is not related to the Project; 2) offsite public and private projects in the immediate Morro Bay area, and 3) large public and private projects in the broader San Luis Obispo County. The process used to identify these projects for consideration in this chapter and the extent to which they are analyzed in each of the environmental resource area discussions is described below.

As indicated in Chapter 2.0 - Project Description, no separate onsite projects are planned for the MBPP. All modernization activities, including demolition and removal of the onsite fuel oil tanks, and demolition of the existing power building and the three existing 450-foot-tall stacks for Units 1 through 4 are considered part of the Project. As a result, the cumulative analysis for each environmental resource area considers whether these onsite Project activities will combine with other offsite projects to produce cumulative impacts.

The City of Morro Bay, County of San Luis Obispo and Caltrans were contacted to identify offsite public and private projects in the immediate Morro Bay area and in the broader area of San Luis Obispo County that have the potential to have a cumulative impact when combined with the Project at MBPP. This process began with identification of more than 70 pending projects before these agencies. Most of these projects were very small, however, consisting primarily of modifications to single family residences. Consequently, as described more fully in the following paragraphs, most of the smaller projects were either eliminated due to their small scope or grouped together for collective consideration to provide a more meaningful potential impact. The locations of identified cumulative projects are shown in Figures 6.1-1 (those in the City of Morro Bay) and 6.1-2 (those in San Luis Obispo County).

Projects proposed within the City of Morro Bay are categorized as follows: major projects, small commercial projects, and small residential projects. Projects were determined to be "major" based on key factors such as land area, public interest, number of people involved and potential visual impact on the community. The major City of Morro Bay projects are considered



CUMULATIVE PROJECTS CITY OF MORRO BAY

DUKE ENERGY MORRO BAY LLC
MORRO BAY POWER PLANT

SOURCES: USGS 7.5 MINUTE TOPOGRAPHIC MAP OF MORRO BAY NORTH AND MORRO BAY SOUTH, CALIFORNIA DATED 1993 AND 1994.

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FIGURE 6.1-1

separately, as appropriate based on their individual characteristics, in the various environment resource area analyses with conclusions drawn for impacts from each project.

The major projects identified within the City of Morro Bay consist of two residential developments, a recreational vehicle (RV) campground, and a shopping center. . These major projects each have the potential for cumulative impacts relative to environmental resources in the City of Morro Bay, primarily due to their size and level of public interest. The location of the proposed RV campground near Morro Rock also could have visual impacts.

Projects that do not qualify as "major" are categorized as either small commercial or small residential activities, depending on their particular characteristics. Based on discussions with city of Morro Bay Public Services Department - Planning Division, the smallest of these commercial/residential Morro Bay pending projects were eliminated from consideration in the environmental resource area analyses. This is because their impacts are considered to be negligible based on their limited scope and duration. The other small commercial and residential projects are considered collectively because consideration of specific effects from the individual smaller projects would result in impacts that are localized and which would, by themselves, be too small and localized to combine with the Project at MBPP for any meaningful cumulative impact. Considering these small projects collectively, however, allows their cumulative effect to be evaluated with the Project at MBPP to determine an overall impact on the City of Morro Bay. By contrast, each major project alone is combined with the Project at MBPP to determine potential cumulative effects.

Small commercial/residential projects identified within the City of Morro Bay consist primarily of single-and multi-family residences, office buildings, a self-storage facility, and a fast-food restaurant. Due to their smaller size, potential cumulative impacts of these projects depend primarily on development schedules and the extent to which their construction coincides with Project construction activities.

The identified major and small projects in the City of Morro Bay are briefly described below. The numbers in parentheses correspond to the numbers shown on the City of Morro Bay Cumulative Projects Locations (see Figure 6.1-1):

- City of Morro Bay Pending or Approved Major Projects:
 - **RV Campground (1):** A camping area located near Coleman Park on the sandspit between Morro Rock and Embarcadero. The project is under review by the City of Morro Bay Public Services Department, and there is no construction schedule or completion date.



SITE



REFERENCE: USGS NATIONAL ATLAS SOUTHERN CALIFORNIA MAP, 1973.

CUMULATIVE PROJECTS SAN LUIS OBISPO COUNTY

DUKE ENERGY MORRO BAY LLC
MORRO BAY POWER PLANT

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FIGURE 6.1-2

- **Cloisters Housing Tract (2):** A 120-unit housing project located north of MBPP along Morro Strand State Beach. The project is approved. The project was approved and the subdivision and public improvements are complete. Approximately 25 percent of the homes in the tract have been constructed as of October 2000.
- **Tri-W Shopping Center (3):** A 126,000-square-foot development located northeast of the Highway 1/Morro Bay Boulevard interchange. This project has been withdrawn. The developer is revising the project and there is no schedule for the revised project submittal.
- **Colmer Housing Tract (4):** A 36-dwelling unit project located at Main Street, Morro Avenue, South Street and Olive Street. This project's zoning change from visitor serving to residential was approved by the Coastal Commission in the spring of 2000. There is no construction schedule or completion date.
- **Harbor View Hotel (5):** A new 12 to 15 room hotel has been proposed for a site that was previously occupied by a 20 to 25 room hotel. The project is currently being reviewed by the City of Morro Bay Public Services Department and a public hearing is scheduled for November 2000. There is no construction schedule or completion date.
- City of Morro Bay Pending or Approved Small Projects:
 - **Rock 'n Burger (6):** A 1,736-square-foot fast-food facility located across Atascadero Road from Morro Bay High School. This project has been approved. At this time, there is no construction schedule or completion date.
 - **Various Small Commercial Projects (7 - 12):** Located throughout the Morro Bay area, these projects range in size from 1,000 to 1,500 square feet. They are considered collectively in Section 6.11 - Traffic and Transportation.
 - **Various Small Residential Projects (13 - 16):** Located throughout the Morro Bay area, these projects range in size from 1 to 12 dwelling units. They are considered collectively in Section 6.11 - Traffic and Transportation.

Projects outside the City of Morro Bay in San Luis Obispo County are also considered in the cumulative impact evaluations. Consideration of projects throughout the entire County was determined to be inappropriate, however, since most locations are too distant from Morro Bay to have the potential for cumulative impacts. Consequently, the focus for potential county cumulative projects centered on planned or approved activities in the central and western portions of San Luis Obispo County.

Of the various projects proposed for the larger area in San Luis Obispo County, most involve the construction or remodeling of single family dwellings and agricultural facilities, especially wineries, plus other small commercial projects. This pattern of construction has been ongoing and increasing since about 1996 (Jones, 1999). Because these projects are small and are located

10 miles or more from MBPP, their impacts are considered to be localized without the potential to affect Morro Bay. These small projects in the County were therefore not considered any further in this analysis.

On the other hand, based on their scope, large projects in the western and central County area that are ongoing or proposed do have the potential to result in cumulative impacts. These projects are described briefly below (Caruso, 2000). The numbers in parentheses correspond to numbers shown on the San Luis Obispo Cumulative Project Location Map (see Figure 6.1-2):

- **San Luis Obispo County Airport Expansion (17):** This is an estimated \$20 million project that includes a runway extension, terminal expansion with additional gates. The environmental analysis (EA/EIR) was certified December 1, 1998. Construction began in the late summer of 2000 and is scheduled to be completed in 2002.
- **Woodlands Residential/Commercial Development (18):** This project includes a 1,320-unit residential development, a 23-acre business park, resort hotel and a golf course, located in Nipomo. The specific plan has been adopted. Construction is planned to begin in 2002, with a 10- to 15-year buildout.
- **Cypress Residential Development (19):** This is a 384-lot residential subdivision located on Nipomo Mesa. Construction is planned to begin in 2000 and continue at least into 2005.
- **Guadalupe Oil Field Cleanup (20):** This ongoing cleanup project is located in southwest San Luis Obispo County. It is primarily an earthmoving project, as contaminated soil is being treated onsite. There can be as many as 50 to 60 workers onsite at one time. Phase I (excavation and removal of 500,000 cubic yards of soil) will be completed in 2002. Subsequent activities depend on regulatory agency evaluations.
- **Avila Beach Cleanup (21):** This is an ongoing cleanup of a retired tanker terminal and tank farm located in Avila Beach, completed in May 2000, including public improvements. Subsequent rebuilding in Avila began in the summer 2000. It is estimated that approximately 60,000 square feet of commercial building, all as small storefront properties, will occur between 2000 and 2005, as part of the rebuilding process.
- **Cuesta Grade Improvements - Highway 101 (22):** This is a 3-mile Highway 101 upgrade project that will add new steep grade truck climbing lanes, shoulders and a new concrete median to the existing 4-lane highway. The entire upgrade project extends from about 2 miles north of the San Luis Obispo city limits to La Cuesta Summit, about 1 mile south of Tassajara Creek Road. The Cuesta Grade project began in the fall of 1999 and is scheduled for completion in the fall of 2002.
- **Duke Energy Offsite Tank Farm Decommissioning and Removal (23):** This project is on the top of the hill on the north side of Highway 41 about a two miles outside of Morro Bay. The project will include cleanup and removal of existing fuel oil tanks that at one time were used by PG&E to store fuel oil for use at the MBPP. The project is expected to take

9 months to a year and will be subject to permitting by the County of San Luis Obispo. At this time, no permit application has been filed and no construction schedule has been established. It is anticipated that this work will be completed in approximately the same time frame as the onsite tank decommissioning and removal activities.

- **PG&E Diablo Canyon Dry Cask Storage (24):** This proposed project has recently been initiated and involves the construction of a storage facility for spent nuclear fuel within the existing power plant compound. Preliminary discussions with the County have occurred. PG&E's schedule calls for application next year to the federal Nuclear Regulatory Commission for permission to construct the onsite storage facility. The proposed storage facility is necessary due to projections that the existing plant's storage pools will reach capacity by 2006. The plant is scheduled to operate until 2025 and extra storage space needs to be created. Approval will require the cooperation of state and county officials and will include numerous public hearings. Construction is scheduled to commence 2004-5.
- **Southern California Water Company - Water Wells (25):** Located near South Bay Boulevard in Los Osos, this project recently received permits for the construction of water wells and associated access roads. Construction has begun and will be completed in late 2001.
- **Miscellaneous telecommunications (fiber optic cable infrastructure) projects, ongoing:** These projects are ongoing over the next 5 years and involve installation of fiber optic cable along the major transportation corridors, U.S. 101, Highway 1, and railroad.

Even though the scope of these large projects in the County creates the potential for cumulative impacts over a wide area, hardly any of these projects were found to have potential cumulative impacts when considered with the Project. As a result, it was determined that very few of these regional projects would require evaluation in detail for cumulative impacts in each environmental resource area. This screening level evaluation is summarized in Table 6.1-1. As shown, socioeconomic was determined to be the only MBPP resource area with the potential for cumulative effects when considered with these major County projects. This is because of the potential need for the same types of construction manpower, equipment resources and local/regional services as the Project at MBPP.

It was initially thought that traffic and transportation issues associated with these large projects in the County could result in the potential for regional cumulative impacts. However, upon closer scrutiny, impacts related to traffic from most of these projects were considered to be too distant to affect traffic in the Project vicinity. Nevertheless, the offsite tank decommissioning and removal activities are close enough to the site to be considered as a cumulative project in the Traffic and Transportation Section of this AFC. In addition, the oil field cleanups were also thought to have the potential for regional cumulative impacts due to their potential to affect

Class I disposal sites. However, the cleanups of these sites are in situ and therefore would not impact Class I disposal sites potentially utilized by the MBPP Project.

6.1.5 SUMMARY

As described above, the analyses in the following sections of this chapter (Sections 6.2 through 6.18) present detailed evaluations of environmental impacts associated with the Project and identified cumulative projects. The results of these analyses can be summarized as follows:

- No significant Project impacts were identified for any environmental resource area which could not be reduced to below a level of significance by either project design features or with mitigation measures. Similarly, no significant cumulative impacts were identified after evaluation of Project impacts with the identified cumulative projects for any of the environmental resource areas. Therefore, no mitigation measures are required to mitigate cumulative impacts in any of the environmental resource areas analyzed in this chapter.

As summarized above and based on the evaluations contained in the environmental resource area analyses in this chapter, it is concluded that overall environmental impacts from the Project are not significant. The Project is consistent with applicable LORS, project design features, and identified mitigation measures that will be implemented as part of the Project to minimize, and in some cases even improve, local effects of the Project on the Morro Bay community.

6.1.6 REFERENCES

Caruso, J. Associate Planner, San Luis Obispo County Department of Planning and Building. Personal communication. October 2000.

Jones, L. Development Review Research, San Luis Obispo County Department of Planning and Building. Personal communication. June 1999.

**TABLE 6.1-1
OFFSITE DEVELOPMENT PROJECTS
FOR CUMULATIVE IMPACT ANALYSES**

POTENTIAL DEVELOPMENTS	ENVIRONMENTAL RESOURCE AREA																
	Air Quality	Geologic Hazards and Resources	Agriculture and Soils	Water Resources	Biological Resources	Cultural Resources	Paleontological Resources	Land Use	Socioeconomics	Traffic and Transportation	Noise	Visual Resources	Waste Management	Hazardous Materials Handling	Public Health	Worker Safety	Transmission Systems Safety and Nuisance
MBPP ONSITE ACTIVITIES																	
Project Covered by AFC <ul style="list-style-type: none"> Combined-Cycle Units (1,200 MW) Demolition of Onsite Fuel Oil Tanks Units 1-4 Stacks/Power Building Demolition/Storage 	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
OFFSITE PROJECTS⁽¹⁾																	
City of Morro Bay																	
1. RV Campground	○	○	○	○	●	●	○	●	○	●	●	●	●	○	●	○	○
2. Cloisters Housing Tract	○	○	○	○	●	●	○	●	●	●	●	●	●	○	●	○	○
3. Tri-W Shopping Center	○	○	○	○	○	○	○	●	●	●	●	●	●	○	○	○	○
4. Colmer Housing Tract	○	○	○	○	○	○	○	●	●	●	●	●	●	○	○	○	○
5. Harbor View Hotel	○	○	○	○	○	○	○	●	●	●	●	●	●	○	○	○	○
6. Rock 'n Burger	○	○	○	○	○	○	○	●	●	●	●	●	●	○	○	○	○
7.-12. Small Commercial Projects	○	○	○	○	○	○	○	●	●	●	●	●	●	○	○	○	○
13-16. Small Residential Projects	○	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○
San Luis Obispo County																	
17. County Airport Expansion	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○	○
18. Woodlands Residential/Commercial Development	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○	○
19. Cypress Residential Development	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○	○
20. Guadalupe Oil Field Cleanup	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○	○
21. Avila Beach Cleanup	○	○	○	○	○	○	○	○	●	○	○	○	○	○	○	○	○
22. Cuesta Grade Improvements	○	○	○	○	○	○	○	○	●	●	○	○	○	○	○	○	○
23. Duke Energy Offsite Tank Farms	○	○	○	○	●	●	○	○	●	●	○	○	●	○	○	○	○
24. PG&E Diablo Canyon - Dry Cask Storage	○	○	○	○	○	○	○	○	●	○	○	○	○	●	●	○	○
25. Southern California Water Company - Water Wells	○	○	○	○	●	●	○	○	○	○	○	○	○	○	○	○	○
-- Miscellaneous Fiberoptic Projects (County-Wide)	○	○	○	○	●	●	●	○	●	○	○	○	○	○	○	○	○

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LEGEND: ● = Potential for Cumulative Impacts.

○ = No Potential Cumulative Impacts when considered with the Project.

⁽¹⁾ See Figures 6.1-1 and 6.1-2 for location of Offsite Development Projects that correspond to the numbers on the projects on this table.